WHAT IS CLAIMED IS:

1. A video data converter for converting input video coded data based on a first video coding scheme to video coded data based on a second video coding scheme, said first video coding scheme
5   carrying out coding by dividing each frame of a video signal into specified segments and by selecting coding parameters including a motion vector for each specified segment, and said second video coding scheme carrying out coding by dividing each frame of the video signal into specified segments and by
10 selecting coding parameters for each specified segment, said video data converter comprising:

a motion vector mapping section for generating a motion vector candidate to be used for each specified segment of the second video coding scheme from the motion vector in the coding
15 parameters of each specified segment of the first video coding scheme; and

a coding parameter deciding section for deciding a motion vector to be used in the second video coding scheme from among the generated motion vector candidates in the second video coding
20 scheme according to a prediction error estimation value that estimates a prediction efficiency when using the motion vector candidates and according to a value that estimates a motion vector rate when using the motion vector candidates.

25 2. The video data converter according to claim 1, wherein said motion vector mapping section generates the motion vector candidates by a number of types of motion prediction that are possessed by the second video coding scheme.

30 3. The video data converter according to claim 1, further

comprising:

a coding mode estimator for estimating a coding mode for each of the specified segments in the second video coding scheme according to a coding mode in the coding parameters of each of

5   the specified segments in the first video coding scheme,

wherein said coding parameter deciding section makes a decision as a coding mode to be used in the second video coding scheme by selecting, when deciding the coding mode, one of two methods of forcedly deciding the coding mode to be used in each

10   of the specified segments in the second video coding scheme according to the coding mode estimated by said coding mode estimator, and of deciding the coding mode to be used in each of the specified segments in the second video coding scheme according to the prediction error estimation value and an

15   estimated rate of the motion vector.

4. The video data converter according to claim 1, further comprising a spatial resolution converter for down-converting spatial resolution of the video data coded in accordance with

20   the first video coding scheme to half resolution in both horizontal and vertical directions.

5. The video data converter according to claim 1, further comprising a temporal resolution converter for implementing

25   temporal resolution of the video data coded in accordance with the first video coding scheme by decimating a frame not used for inter-frame motion prediction.

6. The video data converter according to claim 3, further

30   comprising:

a temporal resolution converter for implementing temporal resolution of video data coded in accordance with the first video coding scheme by decimating frames including a frame used for inter-frame motion prediction, wherein

5   said motion vector mapping section, when the frame used for the inter-frame motion prediction is decimated, decides a motion vector candidate to be used by the second video coding scheme by using the motion vector in the frame decimated, and

said coding parameter deciding section, when the frame used

10   for the inter-frame motion prediction is decimated, decides the coding mode to be used in the second video coding scheme by using the coding mode in the frame decimated.

7. The video data converter according to claim 1, wherein said

15   first video coding scheme is an MPEG-2 video coding scheme specified in ISO/IEC 13818-2, and said second video coding scheme is an MPEG-4 video coding scheme specified in ISO/IEC 14496-2.

8. A video data converting method of converting input video

20   coded data based on a first video coding scheme to video coded data based on a second video coding scheme, said first video coding scheme carrying out coding by dividing each frame of a video signal into specified segments and by selecting part of coding parameters for each specified segment, and said second

25   video coding scheme carrying out coding by dividing each frame of the video signal into specified segments and by selecting part of coding parameters for each specified segment, said video data converting method comprising the steps of:

generating a motion vector candidate to be used for each

30   specified segment of the second video coding scheme from a motion

vector in the coding parameters of each specified segment of the first video coding scheme; and

deciding a motion vector to be used in the second video coding scheme from among the generated motion vector candidates in the second video coding scheme according to at least one of a prediction error estimation value that estimates a prediction efficiency when using the motion vector candidates and according to a value that estimates a motion vector rate when using the motion vector candidates.